ALEKSANDROV, A.G., dots; ARONOVICH, I.S., insh.; BABIKOV, M.A., doktor tekhn.nauk; BATUSOV, S.V., kand.tekhn.nauk; BEL'KIND, L.D., doktor tekhn.nauk; VENIKOV, V.A., doktor tekhn.nauk; VESELOVSKIY, O.N., kand.tekhn.nauk; GOLOVAN, A.T., doktor tekhn.nauk; GOLUBTSOVA, V.A., doktor tekhn.nauk; GREYNER, L.K., insh.; GRUDINSKIY, P.G., prof.; GUSEV, S.A., insh.; DMOKHOVSKAYA, L.F., kand.tekhn.nauk; DROZDOV, M.G., doktor tekhn.nauk; IVANOV, A.P., doktor tekhn.nauk [deceased]; KAGANOV, I.L., doktor tekhn.nauk; KRUMER, L.L., insh.; KOCHENOVA, A.I., kand.tekhn.nauk.; LARIONOV, A.N.; MINOV, D.K., doktor tekhn.nauk; MITUSHIL, A.V., doktor tekhn.nauk; NIKULIN, N.V., kand.tekhn.nauk; NILENDER, R.A., prof.; PANTYUSHIN, V.S., prof.; PASYNKOV, V.V., doktor tekhn.nauk; PETROV, G.N., doktor tekhn.nauk; POLIVANOV, K.M., doktor tekhn.nauk; PRIVEZENTSEV, V.A., doktor tekhn.nauk; RADUNSKIY, L.D., insh.; RUMYN, V.T., doktor tekhn.nauk; SVENCHANSKIY, A.D., doktor tekhn.nauk; SOLOV'YEV, I.I., doktor tekhn.nauk; STUPEL' F.A. kand.tekhn.nauk; TALITSKIY, A.V., prof.; TIMNIKOV, F.Ye., kand.tekhn. nauk; FEDOROV, L.I., insh.; FEDOSEYEV, A.M., doktor tekhn.nauk; KHOLYAVSKIY, G.B., insh.; CHUCHKIT, Yu.S., doktor tekhn.nauk; SHKAF-BARG, Ya.A., kand.tekhn.nauk; SHUMILOVSKIY, N.N., doktor tekhn.nauk; AMTIK, I.B., red.; MEDVEDEV, L.Ya., tekhn.red.

[The history of power engineering in the U.S.S.R. in three volumes] Istoriia energeticheskoi tekhniki SSSR v trekh tomakh. Moskva, Gos. energ. izd-vo.

(Continued on next card)

ALEKSANDROV, A.G.--(continued) Card 2.

Vol.2. [Electric engineering] Elektrotekhnika. Avtorskii kollektiv toma: Aleksandrov i dr. 1957. 727 p. (MIRA 11:2)

1. Moscow. Moskovskiy energeticheskiy institut. 2. Chlen-korrespondent AN SSSR (for Larionov)
(Electric engineering)

VUL'FSON, K.S., prof.; GUREVICH, M.M., prof.; MESHKOV, V.V., prof.; MILEKHIN, R.A., prof.; YUROV, S.G., kand. tekhn. nauk; SOKOLOV, M.V., prof.; ZINEMAN, L.M., kand. tekhn. nauk; BUTAYEVA, F.A., kand. tekhn. nauk; IVANOVA, E.S., kand. tekhn. nauk; SUSHKIN, N.G., kand. tekhn. nauk.

Valentin Aleksandrovich Fabrikant; on his 50th birthday. Svetotekhnika 3 no.12:24-25 D '57. (MIRA 11:1)
(Fabrikant, Valentin Aleksandrovich, 1907-)

NILENDER, N. A.

NILENDER, N.A. prof.; POMIN, V.N., insh.; UL'MISHEK, L.G., insh.

The electric lamp industry in the U.S.S.R. during the past 40 years. Svetotekhnika 3 no.11:10-14 N '57. (MIRA 10:12)

1. Moskovskiy elektrolampovyy zavod.
(Electric lamps)

KILENDER, R.A., prof.

Main problems in the development and improvement of light sources and their solution at the Moscow Lamp Factory. Svetotekhnika 4 no.3:10-12 Mr '58. (MIRA 11:2)

1. Moskovskiy elektrolampovyy zavod.
(Electric lamps)

TYAGUNOV, G.A., prof.; AZAT'YAN, A.D.; ALEKSANDROV, A.G.; ANTIK, I.V.; VASIL'IEV, N.N.; ZHIGAREV, A.A.; KORSHUNOV, S.I.; [illegible], I.V.; [illegible], R.A.

[Electronic vacuum devices; operating conditions, parameters, and characteristics] Elektrovakuumnye pribory; rezhimy, parametry i kharakteristiki. Moskva, 1960. 20 p. (Sbornik rekomendusmykh terminov AN SSSR, Kom.tekhn.terminologii, no.54) (MIRA 14:4)

1. Akademiya nauk SSSR. Komitet tekhnicheskoy terminologii.
(Electron tubes)

KILLMER, R.A., prof.

State of the French lighting apparatus industry. Svetotekhnika 6 no.4:13-14 Ap '60. (MIRA 13:6)

1. Moskovskiy elektrolampovyy zavod.
(France--Electric lighting--Equipment and supplies)

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S/048/61/025/003/047/047
B104/B203

9.4120 (1063, 1105, 1140)

AUTHORS: Nilender, R. A. and Troshenskiy, D. P.

TITLE: Adaptation of luminophores as light sources

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 435-439

TEXT: This paper was read at the 9th Conference on Luminescence (Crystal Phosphors) in Kiyev, June 20-25. 1960. The development of tube luminophores was started in the Soviet Union 20 years ago. Under the direction of S. I. Vavilov, work was carried out at the laboratories of the Moskovskiy elektrolampovyy zavod (Moscow Plant of Electric Tubes) together with the Fizicheskiy institut Akademii nauk (Institute of Physics of the Academy of Sciences) and the laboratories of the VEI. The first luminophore for tubes was cadmium silicate activated with manganese and magnesium tungstate. The Gosudarstvennyy opticheskiy institut (State Optical Institute) was also engaged in further investigations. The industrial production of a calcium halogen phosphate activated with antimony and manganese was started at the "Krasnyy khimik" ("Red Chemist") Plant.

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Adaptation of luminophores as...

Further improvement of this luminophore in 1955-60 is described, and its properties are pointed out. Thus, it is stated that antimony as a sensitizer acts in the trivalent state only. The best halogen phosphate luminophores are, in their structure, similar to apatite in which the calcium is replaced by antimony or manganese. Besides, the replacement of fluorine in this compound by chlorine produces a slight shift of the wavelengths emitted. Antimony forms luminescent centers in the apatite lattice. To prevent the occurrence of hydrosilicate, it is necessary to observe certain conditions in the apatite precipitation and optimum temperatures in the heat treatment. The optimum content of antimony lies at 0.7 - 0.8 %. If manganese is introduced and the fluorine/chlorine ratio is changed, the spectral composition of emission changes, but the stability of the luminophore is not affected. Further, it was found that 4.9 metal atoms should come to 3 phosphorus atoms to obtain maximum brightness and stability. On the basis of the above results, an improved halogen phosphate has been developed; it is being produced now and yields 10 % more light (with 40-w tubes, the light yield is 49-55 lumen per watt). Aging of tubes is connected with the destruction of antimony centers. Thus, reducing compounds cause, in the gas medium, a decrease in lumines-

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Adaptation of luminophores as...

cence of the luminophore by reduction of antimony which can be annulled by oxidation of the reduced antimony. This circumstance is considered in the production of tubes. Due to the production process, the brightness of the luminophore drops by 20-24 % in the finished tube as compared with its maximum brightness. Production methods have been developed with further treatment by weak hydrochloric acid solution after the heat treatment at 1100°C (15-30 min). Such treatment removes manganese oxides from the surface and produces a light yield of 95-97 % of the maximum possible yield. By a reduction of temperature and the use of protective layers it was possible to reduce the liberation of impurities introduced. By an improved vacuum treatment of the tubes and subsequent training of the cathodes with high-voltage discharges in Hg vapor, it was possible to reduce the drop in luminous intensity from 20-30 % to 10-14 % within 3000 hr. The 40-w tubes thus produced had a light yield of 60-62 lumen per watt. V. M. Skobelev, Ch. B. Lushchik, D. P. Troshenskiy, and T. A. Krasnova took part in the subsequent, extensive discussion taking reference to papers by V. L. Levshin, B. D. Ryzhikov, and V. I. Dolgopolov of the VNISI. There are 6 references: 1 Soviet-bloc and 4 non-Soviet-bloc.

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S/048/62/026/004/013/014
B139/B104

AUTHOR: Nilender, R. A.

TITLE: Work on luminescent tubes in the Moscow Electric Lamp Factory

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 4, 1962, 533-538

TEXT: The Moskovskiy elektrolampovyy zavod (Moscow Electric Lamp Factory) is collaborating with S. I. Vavilov on luminescent tubes. A change was made to using calcium halo phosphate with trivalent antimony as sensitizer. The best methods of production were tried out and improved luminophores developed for the tubes TBC (TBS), KhBC (KhBS), BC (BS) and DC (DS) thus increasing the luminous power by 15-20% and the quantum yield to 0.9. This increase is achieved by removing the harmful products of reduction and by better granulation. As the emission of calcium halo phosphate at the red end of the spectrum is insufficient, such compounds as calcium silicate, magnesium arsenate, calcium phosphate and also

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S/048/62/026/004/013/014
B139/B104

Work on luminescent tubes in ...

strontium phosphate were admixed with a view to better color transfer in the case of hot and cold white light and daylight. The technique for producing magnesium arsenate, activated by manganese, had been worked out as early as 1955, and until now this has been the luminescent material used; but in a neutral medium it is not stable enough. The behavior of calcium halo phosphate in mercury discharge at low pressure is now being examined. Losses of brightness in tubes filled with this phosphate are attributable to the presence of reducing media such as carbon monoxide and hydrogen which enter into the productive process. It is aimed, by 1963, to bring the luminous power of the BC-40 (BS-40) tubes up to the level reached in foreign manufactures. At present these works have the following in production: a standard series of tubes rated at 15 to 80 w; a series of small 16-mm diameter tubes at 3 to 13 w; twelve types of annular and U-shaped tubes. The series which are in preparation include one made up of continuous current tubes (whereof two types, 10 and 15 w, are in existence), a series of quick-acting tubes, and a 125-w tube with intensified loading per unit of length yielding 45 lm w^{-1} and having an operational life of 2000 hours. Besides tubes for the four standard

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Work on luminescent tubes in ...

colors, d-lux tubes and others with a color temperature of 4400°K for operating theaters are being made. In 1962 a series of small glow-discharge tubes giving four colors with a power consumption of about 1 w, using either direct or alternating current, has been developed. Long tubes with separate flattened sections for high outputs, as manufactured in the USA, are not yet being produced in the Moscow factory as the necessary technology for shaping the glass is not yet available. There are 5 figures. The English-language references are: W. L. Wanmaker, A. H. Hoekstra, M. G. A. Tak, Philips Res. Repts., 10, 11 (1955); M. Doherty, N. Harrison, Brit. J. Appl. Phys., 6, Suppl. No. 4, 511 (1955); K. H. Butler, H. H. Homer, Illum. Engng., 55, No. 7, 396 (1960).

ASSOCIATION: Moskovskiy elektrolampovyy zavod (Moscow Electric Lamp Factory)

Card 3/3

ILYUSHIN, S.V.; IPATOVA, S.I.; KONOVALOV, F.S.; MAGNITSSON, I.G.; MARSHAK, I.S.; MESHKOV, V.V.; MILENDER, R.A.; PLOKHOTSKIY, Ye.S.; SOKOLOV, I.I. SOUSTIN, V.F.; TSVETKOV, G.M.; YANI, A.K.

Viktor Nikolaevich Fomin, 1904- ; on his 60th birthday. Svetotekhnika 10 no.11:30 N '64. (MIRA 17:12)

L 38900-66 EWT(1)
ACC NR: AP6029724 SOURCE CODE: UR/0109/66/011/005/0966/0967

AUTHOR: Zernov, N. V.; Timofeyev, P. V.; Furaov, V. S.; Kirulin, V. V.; Smirak, G. V.; Spasskiy, B. I.; Milander, P. A.; Grozdover, S. D.; Shemarev, A. M.; Solntsev, V. Ye.; Kuzovnikov, A. A.; [illegible]; Vasil'yeva, M. Ya.; Mitsuk, V. Ya.; Dubinina, Ye. M.; Zheludeva, G. A.

ORG: none

TITLE: Nikolay Aleksandrovich Kaptsov

SOURCE: Radiotekhnika i elektronika, v. 11, no. 5, 1966, 966-967

TOPIC TAGS: electric engineering personnel, magnetron, klystron, corona discharge, gas conduction, gas discharge plasma

ABSTRACT: N. A. Kaptsov passed away 10 February 1966. He was a student of the famous P. N. Lebedev, and performed many fundamental investigations in the development of modern electronics. He was the creator and leader of the chair of electronics of Moscow State University. He developed the concept of phase grouping of electrons. His ideas are the basis for the development of the magnetron and klystron. He developed the concept explaining the phenomenon of corona discharge. He also developed ideas connected with formation of gas conduction and phenomena in a gaseous-discharge plasma. Kaptsov served for years as the head of the physical laboratory and consultant to the Moscow Electron Tube Plant. He was the author of numerous books, including "Physical Phenomena in Vacuum and in Gases, which was translated into foreign languages; he also created and taught numerous electronics courses. [JPRS: 36,501]

SUB CODE: 05, 09 / SUBM DATE: none

Card 1/1 nlp

23656-66 EWA(d)/T-2 IJP(c) AT

ACC NR: AP5025665 SOURCE CODE: PO/0095/65/013/005/0277/0283

AUTHOR: Nilewski, J.; Szewalski, R.

ORG: Institute of Fluid Flow Machines, Polish Academy of Sciences, Gdansk (Instytut maszyn przeplywowych, PAN)

TITLE: Modulated conductivity induction synchronous magnetogasdynamic generator

SOURCE: Polska akademia nauk. Bulletin, Serie des sciences techniques, v. 13, no. 5, 1965, 277-283

TOPIC TAGS: MHD generator, synchronous generator, asynchronous generator, magnetic induction, traveling wave, magnetic field, conductivity

ABSTRACT: The author discusses the results of an earlier study (Modulated conductivity induction of synchronous magnetogasdynamic generator, IFFM Int. Report No. 318, (1964) [to be published in Trans. IFFM]), concerning the operation of a synchronous generator fed with a jet of a working medium with different conductivity.

The layout and working characteristics of an asynchronous generator with a traveling-wave magnetic field are, to a certain extent, similar to those of the synchronous generator under consideration. There are two essential points of difference: a) in a

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ACC NR: AP5025665

synchronous generator, the modulated-conductivity working-medium flow is indispensable, whereas with an asynchronous generator, constant conductivity may be used, and b) an asynchronous generator needs a much higher value of the working medium conductivity than the synchronous generator. The main difference between the asynchronous and the synchronous generator is that the asynchronous generator meets and the synchronous generator does not meet the applicability requirement of magnetic Reynolds numbers for the medium flow in the generator duct. [NT]
Orig. art. has: 3 figures and 12 formulas.

SUB CODE: 13/ SUBM DATE: --May65/ OTH REF: 004/

Card 2/2

NILIN, P.

30356

Dyevushki iz kupavny. (Znatny ye tkachikhi M. Roshnyevye I L. kononyenko. ocherk). Sov. shyenzhina, 1949, No. 5, S. 29-30.

SO: Letopis' No. 34

NILKA, V

RUMANIA/Cultivated Plants. Potatoes. Vegetables. Melons M-5

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1584

Author : V. Nilka
Inst : Not Given
Title : The Problem of Stydying Cauliflower Seed Raising

Orig Pub : Bul. stiint. Acad. RPR. Sec. biol. si stiinte agric., 1956, 8, No 2, 407-417

Abstract : This study attempted to establish the most favorable periods for sowing cauliflower seeds in Transsylvania (Rumania) in order to obtain seedlings for the purpose of seed growing. The sowing took place at various periods from September to February. The best results were shown by seedlings sown during the period from January 15th to February 15th. By sowing in September, the florescent formation phase was accelerated.

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ACCESSION NR: AP4042867

partial phase diagram was constructed of the K_2O-B_2O_3 system (see fig. 2 of the enclosure). A metastable region was found in this system between $K_2O.2B_2O_3$ and $K_2O.4B_2O_3$. Orig. art. has: 4 tables and 5 figures.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences SSSR)

SUBMITTED: 03Dec62 ENCL: 02

SUB CODE: IC NO REF SOV: 002 OTHER: 010

Card 2/4

ACCESSION NR: AP4042867 ENCLOSURE: 01

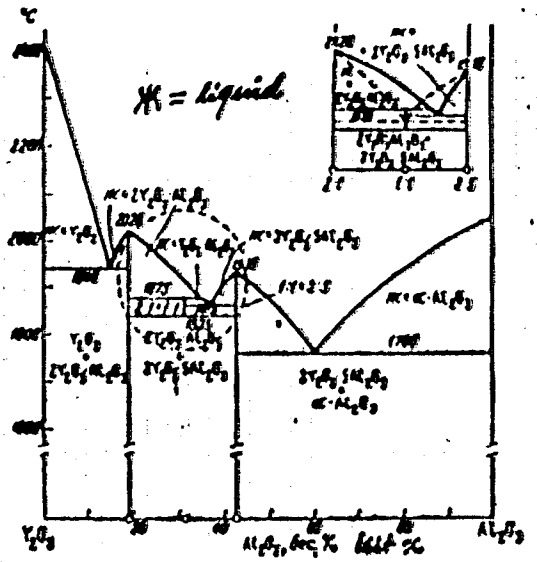

Fig. 1. Phase equilibria in the yttrium oxide-aluminum oxide system.

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KOLOSOV, N.G. (Leningrad, 46, ul. Petrovskaya 34, kv.7); NILOKHIN, A.A. (Leningrad, 46, ul. Petrovskaya, 34, kv.7)

Afferent innervation of the ganglia of the vegetative nervous system. Arkh.anat.,gist.i embr. 44 no.1:3-23 Ja '63. (MIRA 16:5)

1. Laboratory of Morphology, I.P. Pavlov Institute of Physiology, Academy of Sciences, U.S.S.R.
(NERVOUS SYSTEM, AUTONOMIC)

AVDEYEV, Yu.A.; NIKOLAYEVA, A.P.

Control of complex development operations using a critical path method (introduction to the "Part-Time" system). Vych. sist. (MIRA 18:1) no.11:27-54 '64

L 10711-66 EWP(e)/EWI(m)/EWP(w)/T/EWP(t)/ETI P(c)/EWP(b)/ETC(m)-6 JD/WW/WH
ACC NR: AT5027950 SOURCE CODE: UR/0000/65/000/000/0147/0155

AUTHOR: Nikolayeva, L. V.; Borisenko, A. I. (Doctor of technical sciences)

ORG: none

TITLE: Pliable glass enamel coatings for chromel and alumel wires

SOURCE: Seminar po zharostoykim pokrytiyam. Leningrad, 1964. Zharostoykiye pokrytiya (Heat-resistant coatings); trudy seminara. Leningrad, Izd-vo Nauka, 1965 147-155

TOPIC TAGS: enamel coating, glass product, thermocouple, specialized coating, wire

ABSTRACT: Chromel-alumel thermocouples 0.5-0.1 mm in diameter are often set into metallic blocks heated to 700-800C. Attempts to insulate them by glass enamel coatings applied from aqueous suspension failed because of the brittleness of the thick layer obtained. A method was proposed for the application of a 2-3 μ pliable layer from a semicolloidal solution, while retaining the electrical properties at high temperatures. The SiO_2 hydrolysate and the highly dispersed solutions were prepared by the solution ceramic method (S. W. Bradstreet, solution

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ceramic for enameling, Ceramic Age 66, 6, 1955, 24). The calculation of the required concentrations of salts in solutions was made according to the formulas on hydrolysis, (during coating) of selected compounds, e.g., $(C_2H_5O)_4Si \rightarrow H_4SiO_4 \rightarrow SiO_2$, or $2Cr(NO_3)_3 \cdot 9H_2O \rightarrow Cr_2O_3 + 3N_2O_4 + 1.5O_2 + 18H_2O$. The quality of the solution mixture, and hence the quality of the coatings, depended on the sequence of mixing. The solutions of various salts should be mixed by adding them into the SiO_2 hydrolysate in the following sequence: (1) H_3BO_3, $LiNO_3$, $NaNO_3$, $Ca(NO_3)_2$, $Sr(NO_3)_2$, $Zn(NO_3)_2$, $Al(NO_3)_3$; (2) $Ba(NO_3)_2$; $Zr(NO_3)_4$; (3) $Pb(NO_3)_2$; and (4) $Co(NO_3)_2$, $Ni(NO_3)_2$, $Cr(NO_3)_3$. The surface of the wire should be cleansed of oil and grease. An immersion of the wire for 5-6 minutes into a heated (70-90C) mixture of $NaCO_3$ 25-30 g/l and reagent OP-10 3-6 g/l with subsequent washing in hot water and acetone was sufficient. The coating could be made either by immersion into a solution or by drawing through a plastic sponge wetted by the solution. After coating wires were dried for several minutes at 60-70C and rapidly baked in an electric furnace at the melting temperature of the coating (850-950C). The coatings obtained sometimes had small defects easily removable by repeated coating. The three coatings containing (1) 25.0% SiO_2, 13.0% CaO, 12.0% B_2O_3, 5.0% ZnO, 3.0% MgO, 4.0% MnO_2, 2.0% NiO; (2) 33.0% SiO, 0.45% K_2O, 0.5% Li_2O, 5.8% CaO, 6.5% B_2O_3, 43.0% PbO, 10.0% BaO, 1.0% CoO; and (3) 42.0% SiO_2, 10.0% K_2O, 5.0% B_2O_3,

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ACC NR: AT5027950

43.0% PbO, 2.0% CoO has uniform continuous layers, 3-5μ thick, and satisfactorily high pliability and electric insulating properties. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: 20Jul65/ ORIG REF: 003/ OTH REF: 003

3/3

NIKOLAIEVA, M.G.; YUDIN, V.G.

Methods for accelerated presowing treatment of woody plant seeds. Trudy Bot.inst. Ser.4 no.17:5-23 '64. (MIRA 18:1)

NIKOLOV, S. Kh.

NIKOLOV, S. Kh.: "Problems of labor hygienenin processing petroleum containing small quantiites of sulfur, in the plants of Krasnodar Kray." Published by "Sov. Kuban'." Kuyazan' State Medical Inst imeni Academician I. P. Pavlov. Kuban' State Medical Inst imeni Red Army. Krasnodar, 1956. (Dissertation for the Degree of Candidate in Medical Sciences.)

Knizhnaya letopis', No. 39, 1956. Moscow.

NILOL'SKIY, V.A.

NILOL'SKIY, V.A., professor

Clinical and diagnostic aspects of tumors of the frontal lobes.
Vop.neirokhir. 21 no.5:30-38 S-O '57. (MIRA 10:11)

1. Klinika nervnykh bolezney i neyrokhirurgii Rostovskogo-na-Donu meditsinskogo instituta.
(FRONTAL LOBE, neoplasms,
clinical & diag. aspects (Rus))

NILOMENKO-BORODICH, M.K.

NILOMENKO-BORODICH, M.K. (Moskva).

Lame's problem for a parallelepiped in the general case of surface loads. Prikl. mat. i mekh. 21 no.4:550-559 Jl-Ag '57. (MIRA 10:12)
(Elastic plates and shells) (Calculus of tensors)

MILOS NOSAL, Prof. MUDr. (Bratislava, Ruzova 8)

Education in industrial medicine. Pracovni lek. 9 no.6:477-478 Dec 57.

(INDUSTRIAL HYGIENE
in Czech. (Cs))

L 33242-65 FSF(h)/FSS-2/EWT(1)/EWG(v)/EWA(d)/T/EED(b)-3 Pn-4/Pe-5/Pae-2

ACCESSION NR: AT5006391 S/2547/64/000/149/0017/0030 49 48

AUTHOR: Gerasimova, O. A.; Gordon, G. Y.; Nilov, A. A.

B+1

TITLE: The determination of contrast transfer characteristics on the electron-optical bench of the TsNIIGAiK

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"yemki i kartografii. Trudy. no. 149, 1964. Issledovaniya po aerofotografii (Research on aerophotography), 17-30

TOPIC TAGS: aerial photography, contrast transfer characteristic, electron optics, aerial photograph objective, optical bench

ABSTRACT: After a brief theoretical introduction, the authors 1) present a detailed description of the electron optical bench constructed at the TsNIIGAiK in for the determination of the contrast transfer characteristics of aerial photograph objectives having focal distances within the 36 to 150 mm range, 2) describe the testing of all the separate components of the bench, and 3) present the results of the determination of the contrast transfer characteristics of a number of aerial photograph objectives. Tests showed that the existing bench can

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ACCESSION NR: AP5006391

yield contrast transfer characteristics only for axial rays. Consequently, the next step in the continuing research at the Institute is to develop methods for: 1) measuring the contrast transfer characteristics over the entire field of view; 2) determining the complete transfer function, which requires the construction of an additional instrument for the measurement of phase transfer characteristics; and 3) determining the transfer functions of aerial photographs. Orig. art. has: 4 formulas, 19 figures, and 2 tables.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"yemki i kartografii, Moscow (Central geodesics, aerophotography and cartography scientific research institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: ES, OP

NO REF SOV: 003 OTHER: 003

ACCESSION NR: AT4024401 S/2529/61/000/066/0111/0116

AUTHOR: Zhukov, V. V.; Nilov, A. A.

TITLE: The surface layer radiographic investigation of some heat-resistant alloys after heat treatment in different gaseous media

SOURCE: Kazan. Aviatsionnyy institut. Trudy, no. 66, 1961. Aviatsionnyye dvigateli (Aircraft engines), 111-116

TOPIC TAGS: heat treatment, heat resistant alloy, nickel alloy, furnace, forging, drop forging, pitting, scale formation, metal loss, forging die, die, steel tool, machining, turbine blade, protective medium, argon, ammonia, nimonic alloy, roentgenography, muffle furnace, microhardness, annealing

ABSTRACT: For the heating preparation of a heat-resistant nickel-base alloy, furnace equipment with overhead air is used in production before drop forging and during heat treatment. As a result, during extended heating of the pieces at sufficiently high temperature, a scale forms, and a pitting of the alloying elements takes place at their outer surface. Scale formation causes irreversible losses to the used scarce metals, reduces the life of the forging dies and high-speed, steel tools, and increases the volume of the required machining. For example, the technological allowance for final machining of a gas turbine blade, about

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2-3 mm, is determined mainly by the depth of the defective layer arising as a result of the application of heat treatment. The volume of the blade machining necessary, because of such allowances, may constitute 20-30% of the total machining volume required by a gas turbine. Application of a protective gaseous media during heat treatment was suggested as a solution to the problem. However, there is lack of sufficient information on the protective properties of different gases. From data presented in earlier publications, it was found that besides argon, obtainable in limited quantities only, dissociated ammonia also exhibits satisfactory protective properties. No data were available from the literature on the depth of defective, surface-layer build-up when Nimonic-type alloys are heat treated in different gaseous atmospheres. Consequently, tests were performed by Yu. M. Lepilov (assistant) and several students of the Kazanskiy aviatsionnyy institut (Aviation Institute of Kazan), the results of which are reported by the authors. The tests consisted of roentgenographic investigation of two heat-resistant, nickel-base alloy samples: EI 437 B and EI 617 (see Table 1 of the Enclosure) after heat treatment in air, nitrogen, nitrogen + 10% hydrogen, and argon atmospheres. The sample blanks were cut from commercial bars and ground to size (40 x 13 x 7 mm). The heat treatment was performed in a muffle furnace (see Table 2 of the Enclosure). The nitrogen, argon, and nitrogen-hydrogen mixture were purified from oxygen and dried with silica gel. After heat treatment, the specimens were cut into two parts; one part of

ACCESSION NR: AT4024401

each sample was investigated roentgenographically, and the other was tested for microhardness on the PMT-3 device at a load of 200 g. Radiography was performed on the URS 70 device, whereby a vacuum-annealed, copper foil 0.06 mm thick was glued to the test sample with cellulose, nitrate-base lacquer and used as a reference sample. The test sample was rotated in the device during roentgenography. Fixed on the radiographs were (024) lines of the reference foil and of the test specimen. The roentgenograms were evaluated on a recording microphotometer (modified MF-2). From the obtained photometric curves, the distance between the α_1 - components of the (024) — line doublet of the sample and the reference sample. From this distance the value of the lattice parameter was determined. The error in determining the parameter did not exceed ± 0.0005 kX (X = X-unit). Before each succeeding roentgenographic measurement, a thin surface layer was removed from the test sample. The consecutive removals of the surface layers were performed by 5 HNO_3 - 50 HCl - 45 H_2O etches, and the error of thickness measurements by the micrometer did not exceed 0.005 mm. Curves were plotted showing the results of the roentgenographic measurements (lattice parameter versus layer depth) and of microhardness versus layer depth. Both types of curves showed satisfactory consistency. It was found that in the surface layer of the samples the lattice parameter of the solid solution increased with the depth, indicating a pitting of the alloying elements (Al, Ti, Cr) in the outer portion of the surface layer. The depth of the defective layer was assumed to extend to the point from which a noticeable decrease of the lattice parameter and of the microhardness could be observed on the experimental curves.

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ACCESSION NR: AT4024401

The results representing the depth of the defective layer determined in the described way are shown in Table 3 of the Enclosure. These results do not differ substantially for both investigated materials. It must be noted that only the effect of heat treatment was investigated by the tests, while in conditions of production the heat treatment is preceded by a number of heatings applied between the press operations. Therefore, in practical cases, the depth of the defectuous layer can be expected to attain a 40-50% higher value. On the basis of the performed investigation, the use of a nitrogen atmosphere with 8-10% hydrogen addition was recommended as an inexpensive and sufficiently available protective medium at heat treatment of Nimonic-type, heat-resistant alloys. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: Aviatsionnyy institut, Kazan (Aviation Institute)

SUBMITTED: 10May61 DATE ACQ: 16Apr64 ENCL: 03

SUB CODE: MM, PR NO REF SOV: 005 OTHER: 000

Card 4/7

ACCESSION NR: AT4024401

ENCLOSURE: 01

Type of alloy	Chemical composition in per cent												
	C	Si	Mn	Cr	Ni	Fe	Cu	Ti	Al	V	Mo	W	B
EI 437B	0.05	0.39	0.26	20.30	base	0.43	0.05	2.59	0.93	-	-	-	0.004
EI 617	0.07	0.43	0.35	15.15	base	1.40	0.08	1.84	1.89	0.24	3.64	5.38	0.005

Table 1. The chemical composition of tested alloys

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ACCESSION NR: AT4024401

ENCLOSURE: 02

Type of alloy	Soaking and quenching	Aging
EI 437B	800 C, 8 hrs; cooled with the muffle by shielding gas	700 C, 16 hrs; cooled in air
EI 617	800 C, 4 hrs; 1190 C, 2 hrs; cooled with the muffle	800 C, 16 hrs; cooled in air
	1050 C, 4 hrs; cooled with the muffle	

Table 2. Heat treatment of test specimens

Card 6/7

21637

S/137/61/000/003/054/069
A006/A101

18.8100 1138, 1160, 1418, 1413

AUTHOR: Nilov, A. S.

TITLE: Recovery of thermo emf induced in copper deformed at various rates

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no.3, 1961, 29, abstract 3 Zh184 ("Uch. zap. Chelyab. gos. ped. in-t", v.5, no.1, 1958, 41-53)

TEXT: The author studied the stability of the energy values stored in Cu at various rates of deformation by torsion. The evaluation of the condition of the deformed metal was made with the aid of isotherms of thermo-emf recovery, obtained after annealing of the deformed specimens at different temperatures (160 - 300°C). One branch of the specimen was deformed. The length of the section deformed was 15 cm. The specimens were twisted by 85 revolutions. The deformation rate amounted to 8,000, 420, 24 and 3.1 revolutions per hour. It was established that the initial thermo emf induced increased with a higher deformation rate raising from 0.0458 at 3.1 rph to 0.0548 μv/degree at 8,000 rph. The dependence between initial thermo emf, E, and deformation rate ω is expressed by formula $E = E_1 + k \ln \omega$. Annealing causes the redistribution of residual thermo emf values. After a given annealing time residual thermo emf is the lower the higher

Card 1/2

S/137/61/000/003/054/069
A006/A101

Recovery of thermo emf induced in copper ...

the deformation rate. At a given deformation rate the temperature (T_{max}) of annealing, assuring maximum recovery of thermo emf, drops with extended time of annealing. At a constant annealing time T_{max} is the higher the lower the deformation rate. A formula is given for the correlation between initial rates of thermo emf suppression, determined by the graphical method from isotherms of thermo emf recovery, and the absolute annealing temperature at a given deformation rate: $dE/dT = A \exp(-U/kT)$ where U is the effective activation energy of thermo emf recovery. It is assumed that the effect of the rate on the recovery of thermo emf is explained by changes in the conditions of forming distortions resulting in the induction of thermo emf. During the deformation process energy is absorbed and the specimens are strengthened. On the other hand the normal structure of the crystal lattice is recovered as a result of relaxation. Due to a reduction of the deformation time, the probability of annihilation of more stable distortions is diminished. Therefore the energy absorbed increases. There are 8 references.

Yu. L.

[Abstractor's note: Complete translation.]

Card 2/2

NILOV, A. S.

Cand Phys-Math Sci - (diss) "Recovery of thermal forces of copper induced in plastic torsion at different rates." Sverdlovsk, 1961. 13 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Ural State Univ imeni A. M. Gor'kiy); 170 copies; price not given; (KL, 10-61 sup, 205)

KUNIN, N.F.; NILOV, A.S.

Recovery of induced thermal forces in copper deformed at various speeds. Fiz. met. i metalloved. 12 no.6:921-923 D '61. (MIRA 16:11)

1. Chelyabinskiy politekhnicheskiy institut.

NILOV, F., podpolkovnik

Engineering support of the attack. Voen.vest. 40 no.4:38-41 Ap '61. (MIRA 14:7)

(Military engineering)

NILOV, G. L.

CA

16

Determination of ascorbic acid in grapes. G. F. Nilov. Vinodelie i Vinogradarstvo S.S.S.R. 6, No. 10, 13-14 (1946).—Grapes, grape skins, or grape seeds are triturated with quartz sand or ground glass and 2% HCl. The mass is transferred to a 100-ml. volumetric flask and made to vol. For must 50 ml. of the liquid in a volumetric flask is made to vol. with 2% HCl. To 10-ml. aliquots are added 5 ml. of 2% KI soln., 5 ml. of 2% HCl soln., 20 ml. of H_2O, and 10 ml. of 0.006 N KIO_3 in the order specified. The free I oxidizes ascorbic to dehydroascorbic acid. After 1 hr. the excess KIO_3 is titrated back with $Na_2S_2O_3$. One ml. of 0.006 N KIO_3 soln. is equiv. to 0.528 mg. of ascorbic acid. M. Hosch

METALLURGICAL LITERATURE CLASSIFICATION

USSR
CATEGORY : Plant Physiology. Respiration and Metabolism.

ABS. JOUR. : RZhBiol., No. 5, 1959, No. 19961

AUTHOR : Koverga, A.S.; Nilov, G.I.
INST. : Nikitsk Botanical Garden
TITLE : The Effect of Mercaptophos (Diethyl-β-ethyl-mercaptoethyl-thiophosphate) on Ascorbinoxidase Activity.
ORIG. PUB. : Byul. nauchn.inform., Gos.Nikitsk. botan. sad, 1957, No. 5-6, 75-78
ABSTRACT : The spraying of mercaptophos insecticide on apple, apricot, peach, plum, sweet and sour cherry, persimmon and box leaves in concentrations of 0.1 and 0.3% (in a preparation) or its addition to crushed tissue in a buffer solution produced a strong (in proportion to the concentration) reduction of ascorbinoxydase activity, lasting over 60 days (determined by the amount of ascorbic acid unoxidized by leaf homogenates). The ascorbic acid content was

CARD: 1/2

NILOV, G. I.

Cand Biol Sci - (diss) "Biochemical changes in the tissues of plants under the influence of new phospho-organic insecticides." Moscow, 1961. 19 pp; (Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev); 200 copies; price not given; (KL, 6-61 sup, 208)

MILOV, G.N.

Expansion of a continuous function into a generalized power series
Uch.zap.Kab.ped.inst. no.8:25-27 '55. (MLRA 10:3)
(Functions) (Series)

NILOV, G.N.

Proof of a basic theorem in higher algebra by means of a Cauchy formula. Uch.zap.Kab.ped.inst. no.8:28 '55. (MLRA 10:3)
(Functions of complex variables)

S/044/60/000/010/001/021
C111/C555

AUTHOR: Nilov, G.N.

TITLE: On the bounds of a zero of the polynomial $1-2t+t^{n+1}$

PERIODICAL: Referativnyy zhurnal, Matematika, no. 10, 1960, 20, abstract 11265. (Uch.zap.Kabardino-Balkarsk.un-ta, 1957, vyp.2, 209-210)

TEXT: Improved bounds for the positive zero x different from 1 of the polynomial $f(t)=1-2t+t^{n+1}$ are given. It is proved that $\frac{1}{2}+\frac{1}{2^4}+\frac{1}{2^5}<x<\frac{1}{2}+\frac{1}{2^3}$ $(n=2)$ and $\frac{1}{2}+\frac{1}{2^{n+2}}<x<\frac{1}{2}+\frac{1}{2^{n+2}}+\frac{1}{2^{n+1}}$ $(n\geq 3)$ holds instead of the inequality $\frac{1}{2}+\frac{1}{2^{n+2}}<x<\frac{1}{2}+\frac{1}{2^{n-1}}$ $(n\geq 2)$ given by Zmorovich (RZhMat, 1960, 7428).

[Abstracter's note: Complete translation.]

Card 1/1

NILOV, G.N.

Solvability of the Galois group of an equation of the fifth degree. Uch. zap. Kab.-Bal. gos. un. no.17:11 '63. (MIRA 17:1)

NILOV, I.I.(g. Sovetsk)

Clinical and histological data on chronic tonsillitis. Vest. oto-rin. 17 no.3:78 My-Je '55. (MLRA 8:9)
(TONSILS--DISEASES)

MILOV, I.I.(g. Sovetsk)

Capillary hemangioma of the nasal cavity. Vest. oto-rin. 18 no.1: 69 Ja-F '56. (MLRA 9:6)

(NOSE--TUMORS) (ANGIOMA)

NILOV, I. I.

"An Instrument for Tympanopuncture".

Voyenno Meditsinskiy Zhurnal, No. 4, 1962

ACC NR: AP6029349 SOURCE CODE: BU/0010/65/000/011/0685/0687

AUTHOR: Ilinov, Tv. H.

ORG: Department of Pediatrics, VMI /headed by Prof. I. Bachev/, Sofia (Katedra po detski bolesti pri VMI)

TITLE: New colorimetric method for determining total lactic dehydrogenase activity in biological fluids

SOURCE: Suvremenna meditsina, no. 11, 1965, 685-687

TOPIC TAGS: colorimetric analysis, enzyme, biochemistry

ABSTRACT: Description of recent German studies by Wagenknecht et al. on the usefulness of phenazine methosulfate method with dichlorphenol-indophenol as colorimetric indicator; the East Germans are manufacturing reagents. [JPRS: 36,592]

SUB CODE: 06 / SUBM DATE: 00Jun65 / ORIG REF: 005 / OTH REF: 003

Card 1/1

MILOV, M., polkovnik

Tank battalion in a meeting engagement (as revealed by data from the West German press). Voen. vest. 41 no.11:121-124 N '61. (MIRA 16:11)

SOV-115-58-8-8/21

AUTHOR: Nilov, N.A.

TITLE: Special Features of Carburetor Engines with Jet Ignition (Osobennosti karbyuratornykh dvigateley s fakel'nym zazhiganiyem).

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 8, pp 25-26 (USSR)

ABSTRACT: The research on combustion processes in engines carried out at the Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics of the USSR Academy of Sciences) resulted in the working out of a new combustion system, called jet ignition, with preliminary chamber. The operation principle of this system is described. Its features are: the ignition of impoverished fuel mixtures being possible, even if the engine is being throttled; the fuel mixture of a special composition for the preliminary chamber is prepared by a special carburetor. Since the engine knocks are partly suppressed, a gasoline with a lower octane number can be utilized. In 1952, the author carried out tests to compare this new method with that of the commonly used spark plug ignition, utilizing a one-cylinder engine. The results of one of his tests are given by graphs in figure 1. In 1957, operation tests were carried out on "ZIL" and "GAZ" type trucks with jet ignition engines of the "NAMI" type by the Moscow and Gor'kiy Automobile Plants. These tests proved

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Special Features of Carburetor Engines with Jet Ignition

that an average fuel economy of 11 to 14% could be obtained. The comparison of the "NAMI" and "ZIL" type jet ignition engines with spark plug ignition engines with I-head cylinder of the "ZIL-150" or "ZIL-120 VK" types proved a fuel economy of 7 to 9%. The main feature of the "NAMI" engine consists in the forced filling up of the preliminary chamber. At present, two models of such engines are being worked out. Their designs are based on the works of the Institute of Chemical Physics of the USSR Academy of Sciences, the "NAMI", the Moscow Automobile Plant imeni Likhachev and the Gor'kiy Automobile Plant. There are: 1 graph and 1 diagram.

ASSOCIATION: Moskovskiy autozavod imeni Likhacheva (The Moscow Automobile Plant imeni Likhachev)

1. Automobile industry--USSR 2. Carburetors--Design 3. Ignition systems--Performance 4. Engines--Performance

L 00862-66 EWT(m)/EWG(m)/T DS

ACCESSION NR: AP5015811

UR/0109/65/010/006/1088/1093
621.385.735

AUTHOR: Iorish, A. Ye; Moyzhes, B. Ya.; Nilov, O. M.; Chudnovskiy, F. A.

TITLE: Pulse emission and thermal conditions of the oxide-coated cathode

SOURCE: Radiotekhnika i elektronika, v. 10, no. 6, 1965, 1088-1093

TOPIC TAGS: oxide coated cathode

ABSTRACT: Pulse current-voltage characteristics of the triode section of a GP1P oxide-cathode tube were measured; 5-μsec pulses singly and at repetition rates of 50, 100, 300, and 100 cps were applied. It was found that, with single pulses, the characteristics are close to the normal Schottky law; thus, the hypotheses explaining the high pulse emission by curving the zones at the surface, by secondary emission, and by surface inhomogeneity have been disproved. The emission monotonously increased with the repetition rate. It can be explained by the heating up of the oxide surface if the very little thermal conduction of the oxide coating is taken into account. It was also found that the cathode heat exchange through radiation is comparable to that through thermal conduction. Orig. art. has: 5 figures, 6 formulas, and 2 tables.

Card 1/2

Nilov, V.A.

AUTHOR: Nilov, V.A. 101-58-2-6/8

TITLE: The Problem of Increasing the Capacity Factor in Electric Installations(K voprosu o povyshenii koeffitsiyenta moshchnosti elektroustanovok)

PERIODICAL: Tsement, 1958, Nr 2, pp 26-27 (USSR)

ABSTRACT: A low value of the capacity factor (cosφ) in electric installations causes a greater loss of electric power and a greater loss of voltage. In new cement mills, cos φ is maintained at a level of 0.92 - 0.95, at the expense of using high voltage static capacitors and high capacity synchronous electric motors operating at a rate of over-excitation. In old cement mills, this method is in most cases not applicable. To increase the capacity factor in the Leningrad Tsement Mill a cascade connection of induction motors of ball mills with collector engines was used. According to the author's and S.N. Rabinovich's suggestion, phase compensators of the Leblanc-Sherbius type were built and connected in cascades with two (existing) induction motors of the raw material mills. The electric motors of the FAMSO-1512-8 type of 570 kw capacity, without phase compensators, developed a cos φ equal to 0.77, while in

Card 1/2

The Problem of Increasing the Capacity Factor in Electric Installations

a cascade with a phase compensator they reached a cos φ of 0.97. The application of this suggestion permitted the raising of the mean capacity factor of the mill from 0.84 to 0.95. The author gives construction details of a phase compensator and shows in figure 1 a circuit diagram with an inserted phase compensator. There is 1 figure.

ASSOCIATION: Leningradskiy tsementnyy zavod (Leningrad Cement Plant)

AVAILABLE: Library of Congress

Card 2/2

1. Electrical systems-Design 2. Cement plants-Electrical equipment
3. Capacitance-Applications

SVETLOV, Petr Vasil'yevich; NILOV, Vladimir Isayevich; KOVAL'CHUK, A.V., red.; GUSAROV, K.F., tekhn. red.

[Methods for quartz crystal stabilization of a frequency band] Metody kvartsevoi stabilizatsii v diapozone chastot. Kiev, Gos. izd-vo tekhn.lit-ry USSR, 1961. 225 p. (MIRA 15:2)
(Frequency regulation) (Radio)

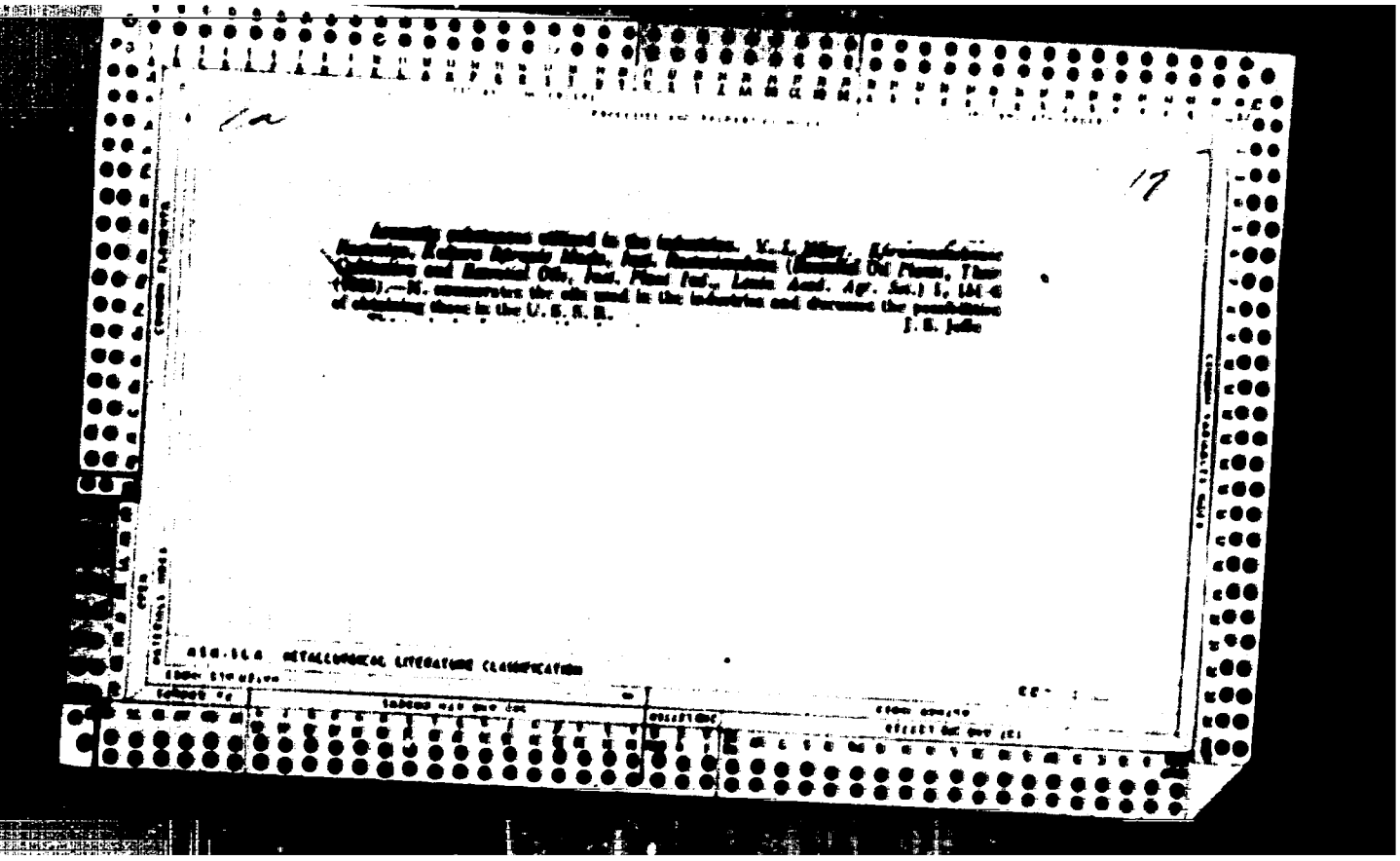
PROCESSES AND PROPERTIES INDEX

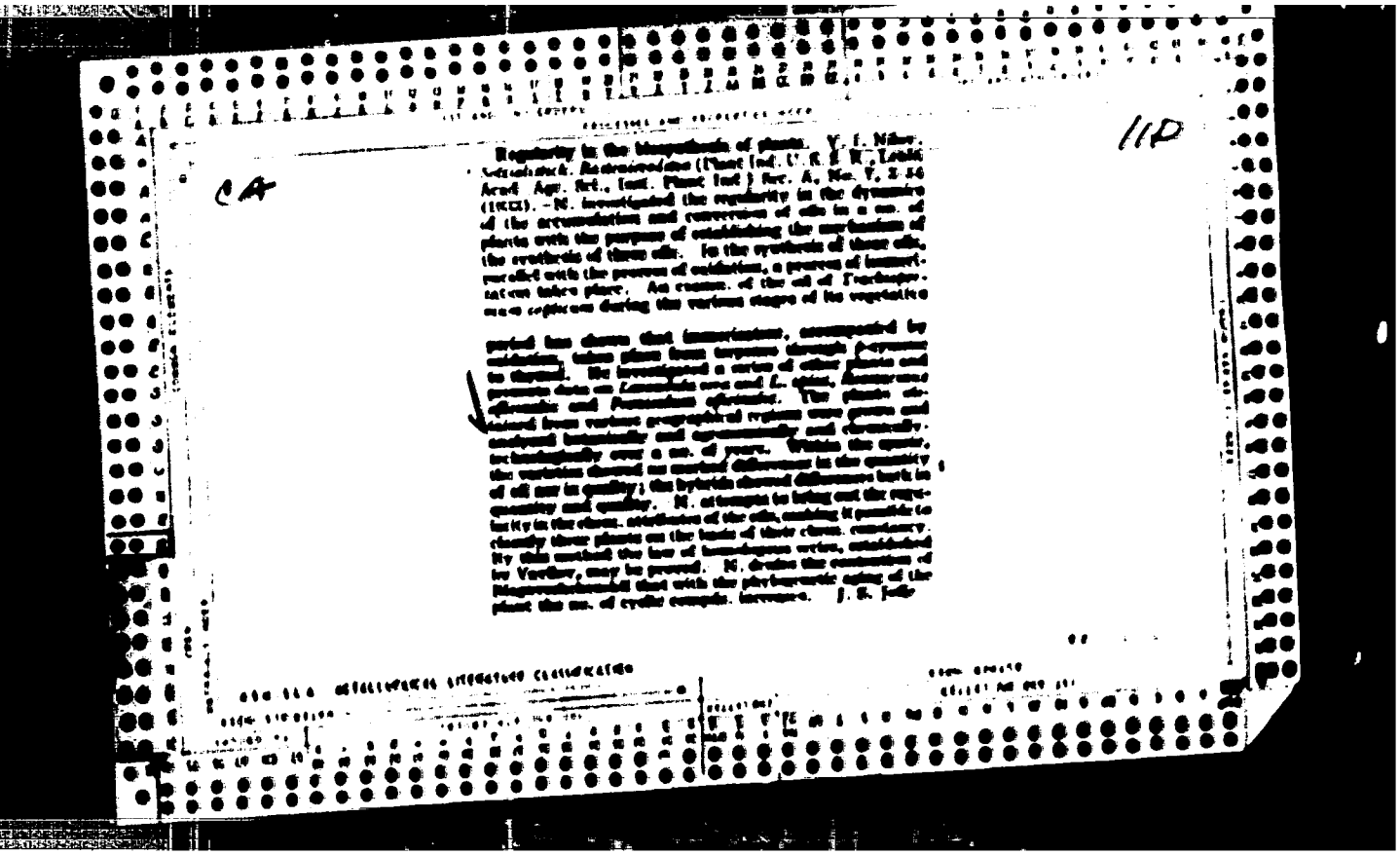
Ca

17

Essential oils, methods of production and investigation. V. I. Nilov. Efiro-maslichnye Rasteniya, Kultura Efirnogo Masla, Inst. [illegible] (Essential Oil Plants, Their Cultivation and Essential Oils, Inst. Plant Ind., Lenin Acad. Agr. Sci.) 5, 15-[illegible](1933).—The general concepts of essential oils, their chief constituents, their origin, their importance to plants, their accumulation and transformation in plants, methods of obtaining them, quant. analysis, sampling, and detn. of consts. are given. F. R. Lollo

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION





CA 110

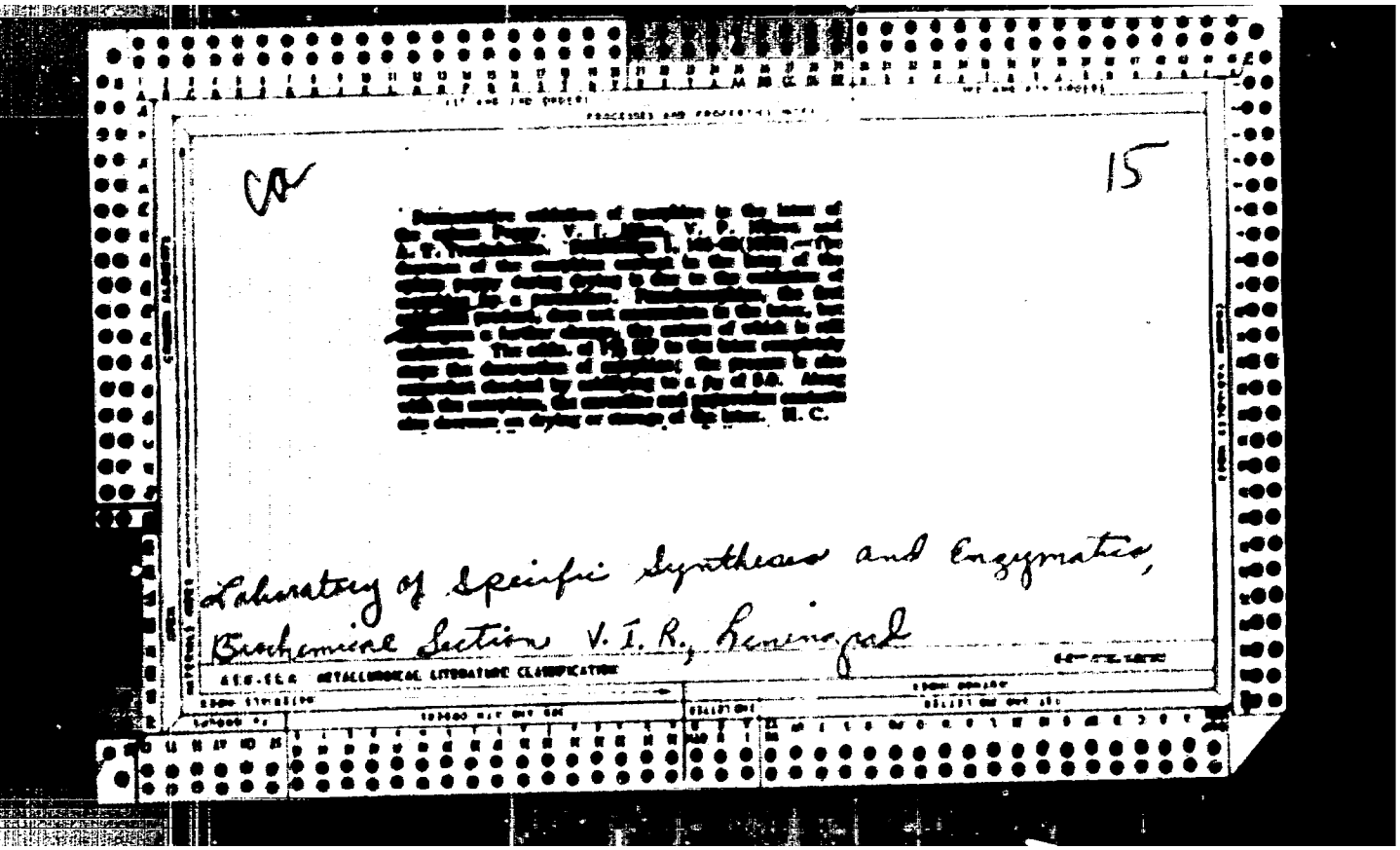
PROCESSES AND PROPERTIES INDEX

Chemical variability in plants and its significance for selection and systematics. V. I. Nilov. *Bull. Applied Botany, Genetics, Plant Breeding* (U.S.S.R.) Ser. A, No. 11, 21-40(1934).—N. cites numerous examples of variations in quantity and quality of the chem. make-up of plants (primarily the oil-bearing ones) and suggests methods of selecting the more effective species and varieties. *Trachyspermum copticum* contains 2.35-6.40% oil and 20-60% thymol; *Foeniculum officinale* has 2.72-13.02% oil, with wide variations in anethol content; *Amygdalus communis*, 40.6-64.30% oil with an I no. 93.13-118.00; flax, 30.40-42.60% oil, I no. 160.8-192.1; in certain poppies the morphine content varied from 2.0 to 20.0%; *Nicotiana tabacum*, 2-8% nicotine; in Turkmenia a variety of *Ocymum canum* was found to contain an oil 70% of which was camphor, and N. suggests that it may be a hybrid of the true *O. canum* with *O. gratissimum*, which is rich in eugenol. Certain individuals will produce certain compds. in larger quantities than the next one. N. shows this by reference to the terpenes (aliphatic, bicyclic, monocyclic and aromatic substances) in a no. of species. On the basis of the chem. variations of ethereal oils N. discusses the concepts of individual, biotype, variety, species and family, and also points out the difficulties in hybridization because of the variability in chem. constituents.

J. S. Joffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0011372



CA

11D

Regularity in the chemical variability of plants. V. L. [illegible]. Bull. Applied Botany, Genetics Plant Breeding (U.S.S.R.), Ser. III, No. 15, 5 [illegible] (in English [illegible]) ([illegible]).—The chem. variability in the ontogenetic evolution of plants is regular and may be expressed by a definite curve. The data on the essential oils in various stages of growth of Trachyspermum copticum and others show that with the development of the plant the complexity of the oils increases. In the early stages γ-terpinene predominates; during blooming large quantities of p-cymene and some thymol appear; at maturity [illegible]% of the oils consists of thymol. Plants produced by the vegetative form of propagation also show appreciable variability with respect to the quantity of oil in the flowers and to the content of esters in the oils. Within each species a variation in the contents of ethereal oils, sugars, alkaloids and other substances was noted. A study of the peach showed that the highest sugar content appears in the varieties which ripen between the early and late varieties, with the lowest sugar content in the early varieties. The fat content of peach kernels showed fluctuations from [illegible] to [illegible]%. By grouping the peaches into early, medium and late varieties it was found possible to differentiate them by the fat content of the kernels. By hybridization of plants which show definite regularities with reference to the essential oils it was possible to bring out a variety which would conform to the characteristics desired. J. S. J.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

11D

Some data on the biochemistry of peppermint. V. L. Nikov and D. D. Punte. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Efirno Masl. Prom., Sbornik Rabot Prochnost Myata* 1960, No. 5, 104-30; *Khim. Referat. Zhur.* 1960, No. 2, 30.—The percentage yield of the essential oil of peppermint decreases from the upper to the lower leaves. The sp. gr. of the oil increases, the angle of polarization decreases and the percentage of bound menthol decreases from the lower to the upper leaves. The variations of the amt. of free menthol among the various levels of the leaves are insignificant and the amt. of menthol increases in the upper layers. There is observed a tendency to a lower content of the oil after late harvesting. Detns. of the synthetic and the hydrolytic activities of invertase indicate that the formation of essential oils from menthone is conditioned by the hydrolytic function of the leaves. The change of the quant. relations between the components of the oil and the physical consts. of the oil correspond to the predominance of any given level of the leaves. H_2S (0.01 mg./l.) and ethylene (of the order of 0.15 mg./l.) increase the yield, the sp. gr. and the percentage of bound menthol of the oil. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

PROCESSES AND PROPERTIES INDEX

Changes in the chemical composition of plants on hybridization. V. I. Nilov, P. A. Nesterenko and L. A. Mikhel'son. [illegible] Dvorzeyski i Kastorzyski Vinodel. Prod 11, No. 2, 5-20(1950); Khim. Referat. Zhur. 1940, No. 6, 42-4.—Essential oils of the parent varieties and of the 1st generation hybrids of Ocimum pilosum Willd and Ocimum canum Sims were investigated. Oil from O. canum contained camphor 40, linalool 6.5, hydrocarbons approx. 35% (α-pinene, camphene, α-terpinene and dipentene); that from O. pilosum contained citral 40, camphor 6.0, phenols 15, methylchavicol 44.0, hydrocarbons approx. 20% (mainly sesquiterpenes). It is concluded that in the presence of substances dissimilar in complexity and similar in compn. in the parent forms, the hybrids inherit the ability to synthesize the more complex substances. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

[illegible] 118

Alterations of the prevailing direction of invertase action in plants in relation to the growth and development. V. I. Nilov and O. N. Pavlenko. *Biokhimiya* 8, No. 1, [illegible]. From these very stages the leaves of plants acquire sp. biochem. properties manifesting themselves in a definite range of variation of invertase. These sp. properties are maintained throughout the lifetime of the leaf, until it falls off. Under the influence of external conditions the ratio synthesis hydrolysis may vary considerably in any of the levels of the plant; but if the shoot as a whole is considered, a regular ratio is retained between the several levels. On artificial removal of the lower and middle leaves at the beginning of flowering of the plant no significant alterations of the direction of invertase action are observed in the apical leaves. If the apical leaves are removed at this stage, the middle leaves (in which hydrolysis usually prevails) tend to exhibit increased synthesizing capacity. In vernalized plants the predominance of hydrolysis in the middle leaves is more clearly marked than in the non-vernalized leaves. In leaves turned yellow and fallen off hydrolysis of invertase always is markedly prevalent. Seven references. W. R. Henn

Lab. of Biochem. of the Nikitsky Botanical Gardens im. V. M. Molotov
Yalta

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

118

Changes of the direction of invertase activity in leaves of various levels. V. I. Nilov and O. N. Pavlenko. *Biokhimiya* 8, No. 1, 41-7 (in German, 47) (1943).—Not all leaves of the same plant are equal in their functions. The leaves of various levels accumulate different substances and in unequal amts. The regularity in the change of the invertase function in all plants investigated (belonging to various families and differing sharply in their biol. properties) is analogous. The lower-level leaves exhibit a lower hydrolytic function of the invertase, those of the medium levels possess a strong hydrolytic function, and those of the upper level again exhibit a lower hydrolytic function or even a synthetic function. In twigs with many levels there is observed a periodical decrease of the hydrolytic function and increase of the synthetic function. The higher the level of the leaves on the twig the greater the synthetic function of the invertase. Two references. W. R. Henn

LAb. of Biochem. of The NIKITSKY Botanical Gardens im. V.M. Molotov, YALTA

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

Ca 110

The chemical composition of [illegible] V. [illegible] and O. N. Pavlenko. Sbornik. Kul'tur. Rastenii 7, 16-20 (1940). W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

11D

The effect of fertilizers, irrigation and of other factors on the chemical composition of peaches. V. L. [illegible] and O. K. [illegible]. [illegible] 200-6(1940). —Monoses and sucrose tend to accumulate during a period of water shortage. It is supposed that the condensation of monoses into sucrose produces a considerable change of the concn. of the juice and regulates the osmotic pressure when the soil contains little moisture. A max. accumulation of sugars to the moment of the final ripening is observed in unirrigated peaches. A max. decrease of reducing sugars occurs during this period. The pollen of other varieties of peaches causes changes in the chem. compn. of peaches. The changes in the chemical composition of peaches during ripening. *Ibid.* 202-6. —During the early phase of development only reducing sugars are present in peaches. Of these, glucose predominates. With ripening glucose decreases and fructose increases. Sucrose increases from 0 to 8.48%. The most rapid accumulation is observed during the last 2 weeks of ripening. The actual acidity decreases with the development of peaches from pH 2.8 to pH 4.00. In the early ripening varieties the acidity decreases from 0.64 to 0.40 and in the late varieties from 0.77 to 0.57%. During ripening malic acid remains unchanged, citric acid decreases considerably toward the end of ripening and the tartaric acid changes little. The moisture content changes very little. The percentage of monoses decreases; the abs. amt. usually increases. Both the percentage and the abs. content of sucrose increases with ripening in all varieties investigated. Acidity increases during the initial stages of ripening and decreases in both relative and abs. amts. with full ripening. W. R. H.

ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION

110

Chemical differences of different varieties of peaches and the possible selection of their chemical composition. V. I. Nikov and O. N. Pavlenko. *Russkaya Kul'tur. Kultur.* 7, 206 16(1960). —About 160 varieties of peaches were investigated. The av. sugar content of the early clingstone varieties is 7.8%, that of the medium-ripening varieties 10.82%, and that of the late varieties 10.0%. Sucrose is the predominant sugar in peaches. The av. content of fat in the peach kernels of the medium-ripening varieties is 48.01% with 20.74 and 56.82% limits for the freestone and 27.16 and 53.57% limits for the clingstone varieties. The I no. of the oil of medium ripening varieties is 105.08. The early varieties contain less oil than do the late varieties. W. R. Henn

ASQ-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

11 D

Some biochemical peculiarities of plant leaves. V. I. Nilov, O. N. Pavlenko and N. F. Lopuna. Bulletin ... Fiziol. Drevesnykh i Kustarnykh Plodovykh Porod 11, No. 2, 47-62; Khim. Referat. Zhur. 1940, No. 6, 66; cf. C. A. 36, 2341[9]. – The object of the expts. was to investigate the physiol. effect of leaves of various levels by studying the activities of a no. of enzymes and the effect of the removal of certain leaves on the ripening of peaches and plums. The activities of catalase and peroxidase and the hydrolyzing effect of invertase were relatively higher in the leaves of the medium levels and those of amylase in the leaves of the lower levels. Removal of leaves of the medium and lower levels accelerated the ripening of fruits. Removal of the higher leaves retarded the ripening of fruits. W. R. Henn

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

KILOV, V.I.; BEGUNOVA, R.D.

Conversion of coloring matter during the ripening and processing of grapes. Biokhimiia 18 no.3:275-278 My-Je '53. (MLRA 6:7)

1. Laboratoriya otdela khimii vina Vsesoyuznogo nauchno-issledovatel'skogo instituta vinodeliya i vinogradstva "Magarach", Yalta.
(Pigments) (Grapes) (Wine and wine making)

MILOV, Vasiliy Ivanovich; SKURIKHIN, Igor' Mikhaylovich

[Chemistry of wine making and brandy production] Khimiia vinodeliia i kon'iachnogo proizvodstva. Moskva, Pishchepromizdat, 1960. 322 p. (MIRA 14:3)
(Wine and wine making) (Brandy)

POPOV, K.S., kand. tekhn. nauk; GAYVORONSKAYA, Z.I.; UMANETS, V.P.; NILOV, V.I.; VALUYKO, G.G.; OKHREMENKO, N.S.; ZHDANOVICH, G.A.; DATUNASHVILI, Ye.N.; SERGEYEVA, N.I.; MARCHENKO, G.S.; KURAKSINA, N.K.; TYURIN, S.T.; TYURINA, L.V.; KRIMCHAK, M.S.; RAZUVAYEV, N.I.; OGORODNIK, S.T.; MIKHAYLOV, S.M.; ZHILYAKOVA, O., red.; GLIKMAN, N., red.; FISENKO, A., tekhn. red.;

[Wine making; manual for the workers of wineries on state and collective farms in the Crimea] Vinodelie; rukovodstvo dlia rabotnikov vinodel'cheskikh savodov sovkhozov i kolkhozov Kryma. Simferopol', Krymizdat, 1960. 415 p. (MIRA 16:3)
(Crimea--Wine and wine making)

MILOV, V.I.; DATUASHVILI, Ye.N.; KALINOVA, A.A.

Study of the processes taking place during the conservation of wine on yeasts. Trudy VNIIVIV "Magarach" 9:153-167 '60. (MIRA 13:11)
(Wine and wine making) (Yeast)

MILOV, V.I., doktor khim. nauk

New technology and production control in wine making. Khar. prom. no.1:66-68 Ja-Mr '63. (MIRA 16:4)

(Wine and wine making)

KILOV, V.I.; KIYAZHKOVA, L.U.

Use of bentonite for preventing the formation of protein turbidity in grape wine. Izv. vys. ucheb. zav.; pishch. tekh. no.2:103-105 '63. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut vinogradarstva i vinodeliya "Magarach", laboratoriya khimii vinodeliya.
(Wine and wine making) (Bentonite)

NILOV, V.I.; NILOV, V.V.

Evaluating grape varieties by the chemical and technological indices. Trudy VNIIViV "Magarach" 13:5-10 '64. (MIRA 17:12)

NILOV, V.I.; NALIMOVA, A.A.

["Ukrainskaia" unit for the bulk fermentation of grape wort] Ustanovka "Ukrainskaia" dlia vybrazhivaniia vinogradnogo susla v potoke. Moskva, Vses. nauchno-issl. in-t vinodeliia i vinogradarstva "Magarach," 1964. 23 p. (MIRA 18:8)

NILOV, V.I.; OGORODNIK, S.T.

Interaction between amino acids and sugars. Prikl. biokhim. i mikrobiol. 1 no.2:139-143 Mr-Ap '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut vinodeliya i vinogradarstva "Magarach".

NILOV, V.I.; NILOV, V.V.

Evaluating grape varieties by the chemical and technological indices. Trudy VNIIViV "Magarach" 13:5-10 '64. (MIRA 17:12)

NILOV, V.V.

Oxygen absorption by the must during the crushing of grapes.
Trudy VNIIViV "Magarach" 13:57-59 '64. (MIRA 17:12)

SKURIKHIN, I.M.; NILOV, V.V.; LEDENKOVA, T.P.

Quantitative determination of aliphatic and aromatic aldehydes in the form of 2,4-dinitrophenyl hydrazones. Prikl. biokhim. i mikrobiol. 1 no. 6:675-679 N-D '65. (MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut vinodeliya i vinogradarstva "Magarach". Submitted April 19, 1965.

USSR/Physics - Electron-optic photography FD-697

Card 1/1 Pub 153-6/26

Author : Vanyukov, M. P. and Milov, Ye. V.

Title : Application of the electron-optic image-converter in photography of rapidly occurring processes

Periodical : Zhur. tekh. fiz. 24, 1209-1218, Jul 1954

Abstract : Possibility of employing electron-optic converters is studied with AEG-type electrostatic focusing as fast-acting shutters by switching them in by means of short voltage-pulses. At instantaneous illumination of the order of 10^6 lux at the photocathode, a redistribution of brightness and distortion of the image occur. These phenomena are due to space charge in the tube and the potential relief on the cathode. Various stages of the spark discharge in argon were photographed at exposures of 0.4 to 2 microseconds. Indebted to A. A. Lebedev. Eleven references including 5 foreign.

Institution : --

Submitted : March 9, 1954

NILOV, Ye.V.

Studying transient processes during pulsed cutting-in of image condenser tubes. Opt.-mekh.prom. 25 no.5:39-42 My '58.
(MIRA 11:9)
(Shutters, Photographic) (Electron optics)

NILOV, Ye.V.

85051

9.4140

S/051/60/009/006/015/018
E201/E191

AUTHORS: Balashov, I.F., Vanyukov, M.P., Kuratov, V.R., and Nilov, Ye.V.

TITLE: Image-Converter Recording of Spark-Discharge Spectra Resolved in Time and Along the Channel Cross-Section

PERIODICAL: Optika i spektroskopiya, 1960, Vol.9, No.6, pp 790-791

TEXT: The authors describe a method of recording rapidly changing spark-discharge spectra using small portions of the discharge channel. The apparatus is shown schematically in Fig.1. Light proceeds via a monochromator M and is projected by a lens O_4 on the photocathode of an image converter ЭОП (EOP) fitted with an electronic shutter. The shutter is connected to a generator of square pulses 3. The generator is synchronized with the discharge by means of a photomultiplier 1 and a synchronization circuit 2. In this way one obtains a spectrum on the image-converter screen at a time governed by the delay between opening of the electronic shutter and the beginning of the discharge. Exposures can be varied from 0.1 to 10 μsec and

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E201/E191

Image-Converter Recording of Spark-Discharge Spectra Resolved in Time and Along the Channel Cross-Section

spectra can be recorded 0.07 to 25 μsec from the beginning of a discharge. The image-converter screen is photographed with a camera, denoted by Ⓒ in Fig.1. The method was applied to a 10 kV discharge across a 4 mm gap in air: N I, N II, and H_α lines were recorded 1, 5, 10 and 21 μsec from the beginning of the discharge (Fig.2).
There are 2 figures and 5 references: 3 Soviet and 2 English

SUBMITTED: June 22, 1960

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20728
S/051/61/010/004/006/007
E032/E314

9.4140 (also 1138, 1141)

AUTHORS: Balashov, I.F., Vanyukov, M.P., Muratov, V.R. and Nilov, Ye.V.

TITLE: The Recording of Time-resolved Spectral Line Profiles by Means of an Image Converter

PERIODICAL: Optika i spektroskopiya, 1961, Vol. 10, No. 4, pp. 540 - 541

TEXT: The present authors point out in* Ref. 1 that the image-converter method can be used to record time-resolved spectra of various parts of a spark discharge. The present note reports results obtained with this method in the recording of time-resolved spectral line profiles. The method has the advantage that a single flash is sufficient to record the profile. The apparatus employed is said to have been described in* Ref. 1. It incorporated the МСП-51 (ISP-51) spectrograph with an 800 mm focal length camera. The image-converter was switched on by 1 μs pulses at different times after the onset of the discharge. The image of the spectral line was photographed from the image-

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* Optika i spektroskopiya, 1960, Vol. 9, No. 6, pp 790-791

The Recording of ....

converter screen with a 1:1 magnification, using a photographic objective with a focal ratio of 1:1.5. Fig. 2 shows the distribution of the intensity at the centre of the H_α line across the channel of a spark discharge in hydrogen. Fig. 3 shows the H_α profile emitted by the central zone of the channel. Preliminary calculations show that by using the highest-sensitivity image-converters (Butslov et al - Ref. 6) and with an intensity corresponding to the saturation region (Vanyukov and Mak - Ref. 7) the profile of the spectral line can be recorded with a spectral resolution of 0.1 Å with an exposure of 1 nsec.
There are 3 figures and 7 references: 6 Soviet and 1 non-Soviet.

SUBMITTED: October 14, 1960

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E032/E314

The Recording of ....

Fig. 2:

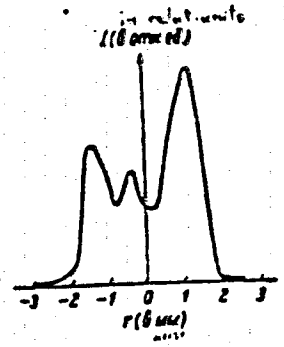
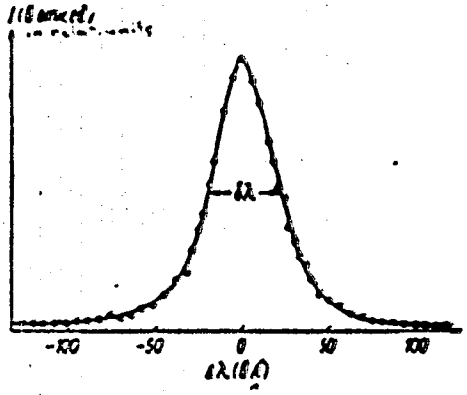


Fig. 3:



Card 3/3

S/120/62/000/002/028/047
E140/E163

AUTHORS: Muratov, V.R., and Nilov, Ye.V.

TITLE: Investigation of the resolution of the image converter ПИМ-3 (PIM-3) with various operating conditions

PERIODICAL: Pribory i tekhnika eksperimenta, no.2, 1962, 124-126

TEXT: An experimental study was made of the resolution obtainable with high-speed image converters with electronic shutters, using unipolar and bipolar (symmetrical) control pulses. The tests were carried out at repetition rates of 250 c.p.s., with 0.5, 2 and 6.5 μs control pulses, having 0.1 μs rise and fall times. Diodes were used to clip the pulse crests to eliminate droop due to low coupling time constants. Maximum resolutions of 100 lines per mm are obtained. The contrast drops rapidly, however, with the number of lines per mm, and more rapidly with shutter pulses applied than in their absence. There are 5 figures. SUBMITTED: August 24, 1961

ASSOCIATION: Gosudarstvennyy opticheskiy institut (State Optics Institute).

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S/120/63/000/001/026/072
E192/E382

AUTHORS: Volosov, V.D., Muratov, V.R. and Nilov, Ya.V.

TITLE: Resolving power of electron-optical converters

PERIODICAL: Pribory i tekhnika eksperimenta, no. 1, 1963, 113 - 116

TEXT: The picture quality of electron-optical converters (which find application in the observation of various electrical processes, accompanied by radiation or absorption of light) is characterized by contrast transfer coefficients of the test pictures with periodically changing brightness. The range of values of these coefficients for the test objects of various frequencies is known as the "frequency-contrast characteristic" of the device. The possibility of using this characteristic for describing the quality of electron-optical converters and estimating their resolving power is investigated. The experimental system for measuring the frequency-contrast characteristic of a converter is shown in Fig. 1. The image of the test picture 4 is projected by the objective 14 onto the photocathode of the converter 15, which is to be investigated. Either a micro-objective of 8X

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Resolving power ....

magnification or a photo-objective, type "Tessar", of f = 7.5 cm is used. An arbitrary square of the test picture can be projected. The picture 4 is illuminated by a filamentary lamp 1 , whose filament is projected onto the objective 14 by the condenser 3 . The image contrast is reduced by illuminating the surface of the photocathode by the lamp 10 . The condenser 8 serves the same purpose as the condenser 3 ; beams of light from lamps 1 and 10 can be combined by means of the flat glass plate 6 . Attenuation of the beams is achieved by introducing neutral filters 2 and 9 of different densities. The chromatic aberration of the objective 14 is compensated by interference and color filters 13 and 11 . The diaphragms 5, 7, 12 and 16 are used to reduce the amount of scattered light. The image 15 received on the screen of the converter is transmitted by the micro-objective 17 onto the film 18 . The experiments showed that the optical devices of the system, in particular the objective 14 , did not reduce the contrast of the image of the test picture in the plane of the photocathode. Several types of electron-optical converters were measured. It was found that the contrast transfer

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Resolving power ....

coefficient of the converters did not depend on the contrast of the test picture. The contrast of the image on the screen of the converter was almost independent of the illumination of the photocathode; reduction of the illumination by three times resulted in an increase in the contrast by only 10%. In the case of visual observation or photographic recording of the image of the converter, the resolution limit for 100% contrast of the test picture was obtained when the image contrast was reduced by 10%. The magnitude of the limit contrast was proportional to the relative fluctuation of the light flux produced by the screen of the converter. There are 3 figures.

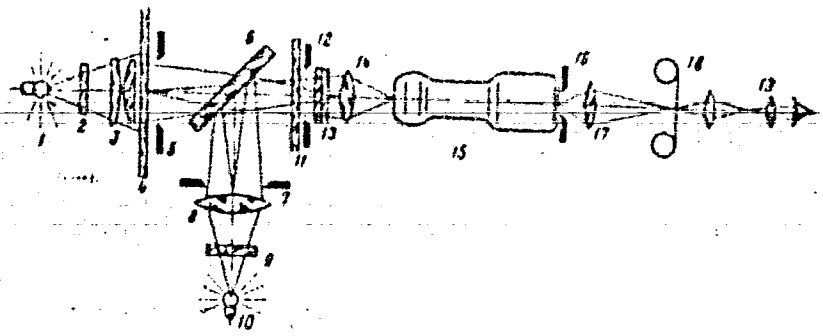
ASSOCIATION: Gosudarstvennyy opticheskiy institut
(State Optical Institute)

SUBMITTED: March 6, 1962

S/120/63/000/001/026/072
E192/E382

Resolving power ....

Fig. 1



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